

WHAT IS CLAIMED IS:

1. A piezoelectric tunable electronic device comprising:
- a substrate;
 - a support comprising a central portion and at least two elastic arms extending
 - 5 from said central portion and in a substantially symmetric arrangement relative to said central portion wherein an end of said elastic arms is fixed to said substrate, with said central portion distanced to said substrate at a predetermined distance;
 - a first electrode positioned on said central portion of said support;
 - a second electrode positioned on said substrate, facing said central portion of
 - 10 said support; and
 - at least two piezoelectric films adhered to said at least two arms of said support respectively at positions substantially symmetrically to said central portion of said support;
 - whereby, by applying a voltage to said piezoelectric films, the distance
 - 15 between said first electrode and said electrode may be changed.
2. The piezoelectric tunable electronic device according to claim 1 wherein said support comprises an elastic strip.
3. The piezoelectric tunable electronic device according to claim 1 wherein said support comprises at least 3 elastic arms extending from said central portion.
- 20 4. The piezoelectric tunable electronic device according to claim 1, further comprising a second substrate positioned above said support, wherein said second electrode is positioned on said second substrate, facing said central portion of said support.

Sub
a

10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
105
110
115
120
125
130
135
140
145
150
155
160
165
170
175
180
185
190
195
200
205
210
215
220
225
230
235
240
245
250
255
260
265
270
275
280
285
290
295
300
305
310
315
320
325
330
335
340
345
350
355
360
365
370
375
380
385
390
395
400
405
410
415
420
425
430
435
440
445
450
455
460
465
470
475
480
485
490
495
500
505
510
515
520
525
530
535
540
545
550
555
560
565
570
575
580
585
590
595
600
605
610
615
620
625
630
635
640
645
650
655
660
665
670
675
680
685
690
695
700
705
710
715
720
725
730
735
740
745
750
755
760
765
770
775
780
785
790
795
800
805
810
815
820
825
830
835
840
845
850
855
860
865
870
875
880
885
890
895
900
905
910
915
920
925
930
935
940
945
950
955
960
965
970
975
980
985
990
995

5. The piezoelectric tunable electronic device according to claim 3 wherein said support further comprises a plate to support said first electrode.

add
A2

11/11/2011 11:11:11 AM